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Saving a National Treasure

April 30, 2015

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Mr. Nicholas DiPasquale
Chair, Chesapeake Bay Program Management Board
U.S. Environmental Protection Agency
Chesapeake Bay Program Office
410 Severn Avenue
Annapolis, MD 21403
Sent via email to: agreement@chesapeakebay.net

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Dear Mr. DiPasquale:

On behalf of the Chesapeake Bay Foundation (CBF), our Board of Trustees, and more than 200,000 members and supporters, we offer comments on the draft Management Strategies for the following outcomes in the Chesapeake Bay Watershed Agreement: 2017 and 2025 Watershed Implementation Plans, Toxic Contaminants Policy and Prevention, Toxic Contaminants Research, Citizen Stewardship, Submerged Aquatic Vegetation, Forest Buffers, Diversity, and Environmental Literacy.

We appreciate the efforts that went into developing these strategies and hope our comments can also inform the development of the work plans.

2017 and 2025 Watershed Implementation Plans and Water Quality Standard Attainment

CBF encourages the jurisdictions to use the opportunity of developing a management strategy and work plans for the 2017 and 2025 implementation outcomes to conduct a critical evaluation of progress on their current Watershed Implementation Plans (WIPs) and milestone commitments. This information should be used to craft the next set of milestones and as well as to start to inform their thinking for the Phase 3 WIPs. Below please find specific suggestions on the draft Management Strategy.

Local engagement. The section in the management strategy notes the jurisdictions conducted outreach to local entities and emphasizes their important role in implementation, yet fails to commit to providing the local level targets and accountability called for in the Phase 2 WIPs. According to EPA guidance on the WIPs

(http://www.epa.gov/reg3wapd/pdf/pdf_chesbay/PhaseIIWIPS/GuideforthePhaseIIWIPs_330final.pdf), the Phase 2 WIPs were to be designed to include "...more



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specific information that facilitates actions by local partners to control nitrogen, phosphorus and sediment to achieve the allocations.” EPA also recommended that the jurisdiction develop “...local area targets [that] will help partners better understand their expected contribution to meet the TMDL allocations and assumptions.” Yet, except for Maryland, no other state has assigned local (e.g., county) level planning targets within their jurisdiction and no jurisdiction is setting milestone goals or tracking implementation at the local level – at least not in a form that is publically available.

We have stated, on numerous occasions, our belief that programmatic and implementation goals should be expressed at the local level. This level of accountability and transparency is needed to provide “reasonable assurance” that necessary pollution reductions from all sources will be achieved by a date certain. As part of the work plans for achieving these outcomes, we strongly encourage the jurisdictions to indicate how they will work with local entities to set local level pollution reduction targets as well as implementation goals in their next set of milestones. The relative ease of use of MAST, CAST, and VAST, particularly with an integrated cost-component, should help make this effort do-able.

Target Implementation. We also recommend the jurisdictions consider how best to target implementation. In the face of ever-shrinking state and federal budgets, it is increasingly important to target practices and geography that will provide the most “bang for the buck.” For example, local partners should be encouraged to target initial actions and appropriate BMPs in the local watersheds that are *also* already subject to bacterial impairments, flooding, are used as public drinking water supply, or where water-related problems otherwise negatively impact quality of life. This coordination of efforts will maximize efficient use of limited funding, including cost-share funds, support local fishing and tourist businesses that rely on water quality, and help connect local citizens to the benefits of the cleanup effort. Recent discussions by the Water Quality Goal Implementation Team about adding an optimization model to CAST that would allow consideration of multiple priorities could facilitate this targeting.

Identify Gaps and Solutions: Many of the items contained in the section entitled “Factors Influencing Success” would better fit under a category entitled “Improving the Science” or something similar, as many of the listed items are focused on improving model inputs or our understanding of the way the Bay ecosystem works, as opposed to influencing success.



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CBF recommends that a section entitled “Factors Influencing Success” include regional and state specific challenges to implementation, a critical evaluation of current efforts and gaps, and then provides suggested solutions to these challenges. As it stands, the list is more or less a “laundry list” of ongoing activities being undertaken by the Water Quality Goal Implementation Team. Similarly, the section entitled “Current Efforts and Gaps” summarizes some of what is in the state WIPs, but without taking it to the next level. A critical evaluation of current progress, gaps, and solutions by each jurisdiction would be incredibly valuable at this stage in the process, to inform the next set of milestones and leading into 2017. For example, watershed-wide the states are relying heavily on “land retirement” and “poultry phytase” to achieve their nitrogen and phosphorus pollution reduction goals. See Appendix D in this link. <http://www.chesapeakebay.net/documents/Complete%20CBP%20BMP%20Verification%20Framework%20with%20appendices.pdf>. Yet few if any jurisdictions have included milestones directed at implementing these practices. We are aware that phytase use will not be included as a best management practice in the next iteration of the Chesapeake Bay Watershed Model, but that does not change the importance of feed additives/amendments in helping to achieve WIP goals. So, for example, if the Bay jurisdictions are relying on reductions in phosphorus related to the use of phytase or other alternate feeding strategies, their milestones should reflect the actions they are taking to achieve these reductions. For example, a commitment to work with the poultry industry to reduce the amount of phosphorus they are adding to the feed.

Toxic Contaminants Policy and Prevention

This management strategy provides valuable information regarding the current efforts and significant gaps that need to be addressed in order for jurisdictions within the watershed to start making real, measurable progress towards reducing the extent and concentration of polychlorinated biphenyls (PCBs) in the Chesapeake Bay and its tributaries. While the management strategy does propose important management approaches that do have the potential to close monitoring, research, and programmatic gaps currently preventing progress, the development of the work plan following the finalization of the management strategy will be equally, if not more important.

CBF encourages the jurisdictions to respond to the urgency of the toxic contaminant issues within the watershed and commit to a clear and robust timeline for taking action on the proposed management approaches. The successes witnessed in the Delaware Estuary should prove that the assumption



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that PCB contamination in the watershed is the result of only historical sources, and is not manageable, is not acceptable. CBF urges the workgroup to continue to apply the lessons learned from the Delaware Estuary. Emphasis should be placed on requiring more frequent monitoring and monitoring capable of low level PCB detection, as well as providing guidance on the implementation of pollutant minimization plans.

Stormwater Regulatory Approaches – mandate monitoring. Using the weak, watered down language in this section such as, ‘assess the feasibility of’ does not adequately emphasize the importance of establishing requirements for targeted NPDES permittees to monitor outfalls for PCBs. Earlier in the management strategy, in the discussion of stormwater monitoring gaps, the strategy definitively states that the lack of monitoring data that exists within the watershed presents a serious challenge. Without monitoring information from industrial and regulated stormwater NPDES permit holders, it is not possible for TMDL programs to estimate loads from specific dischargers to identify sources of PCBs that require reductions, or to track down sources of PCB contamination within the watershed. The workgroup has committed to using the lessons from the Delaware Estuary PCB TMDL to inform the decisions on how to address the issue in the Chesapeake Bay watershed. Therefore, it is important to note that, according to presentations provided by the Delaware River Basin Commission about the process of developing and implementing the PCB TMDL, identifying and quantifying PCB sources using congener-specific analytical methods had several very significant benefits. These included allowing for the prioritization of sources for load reductions, reducing uncertainty in their model inputs, fingerprinting of sources, as well as allowing the targeted permittees to assess the effectiveness of pollutant minimization activities implemented.¹ In the Delaware estuary’s staged TMDL approach, all NPDES permits issued prior to approval of the stage 2 TMDL included non-numeric water quality based effluent limits (WQBELs). For potentially significant dischargers, those WQBELs required the use of Method 1668A to accurately characterize loadings of PCBs.² This action, taken in the Delaware watershed, demonstrates requiring more frequent, targeted monitoring is crucial and must therefore be ‘feasible’. While work has been done by the Chesapeake Bay watershed jurisdictions in developing PCB TMDLs to address the PCB loads in waterbodies identified as being impaired by PCBs, very little work has been done in terms of implementing these TMDLs. This lack of implementation is likely the direct result of not having enough information to be able to assign reductions to specific dischargers. The PCB reduction successes in the Delaware Estuary can largely be attributed to facilities that are actively

¹http://www.chesapeakebay.net/channel_files/22205/t_fikslin_pcb_tmdl_presentation_for_cbtoxics contaminant_group_12_18_14.pdf

² <http://www.state.nj.us/drbc/library/documents/StagedPCBTMDLpptApr03.pdf>



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implementing pollution minimization plans to lower their PCB loads. The top 10 dischargers that contribute 90% of the point source PCB contamination have successfully reduced their loads by 46%.³ The initial monitoring requirement put in the NPDES permits for potentially significant sources was the critical first step in the process that led to those substantial reductions. Given this evidence, CBF calls for strengthening the language in the management strategy regarding establishing monitoring requirements for NPDES permittees to indicate and emphasize the important impact this monitoring information will have in allowing jurisdictions to develop strong PCB TMDLs, as well as enabling jurisdictions to take the necessary, and long overdue, actions to actually implement existing PCB TMDLs.

Increase our understanding of the role of atmospheric deposition: As stated in the management strategy, municipal effluent permit holders maintain that the source of their PCB loads is the background PCBs from atmospheric fluxes in the intake water they pull from rivers. The current data on atmospheric deposition for the watershed dates back to the late 1990s. As a result, some TMDL reductions have likely been incorrectly assigned, and TMDL implementation is not occurring. Up-to-date information on the relative size of atmospheric source and atmospheric deposition will have significant impacts on TMDL development and implementation. Again, information provided by the Delaware Estuary TMDL offers important insight on this issue. Research conducted in the Delaware estuary watershed indicated atmospheric sources were in fact localized, and could therefore be addressed by the appropriate jurisdiction. Having accurate information about the localized atmospheric sources also allowed the Delaware River Basin Commission (DRBC) to demonstrate to wastewater sources that they must put resources towards track-down studies to determine the actual sources of the PCBs in their effluents. It is therefore critical to include in this section how the results of on-going and proposed studies, such as those provided by the National-scale Air Toxics Assessments to be released during 2015, will be used in TMDL refinement and implementation throughout the watershed.

Clarify and provide detailed language in “Contaminated Site Approaches”
“Regulatory Approaches: Investigate whether risk assessment requirements under contaminated site regulations to evaluate potential carcinogenic effects from fish consumption by comparing ambient surface water concentrations of PCBs with human health criterion.” This sentence just does not make sense and does not provide any level of detail to indicate necessary actions going forward.

³ <https://delawareestuary.s3.amazonaws.com/pdf/Summit15/BallA/M-Cavallo%20PDE%20Science%20Symposium%20Presentation%20Final%20REV2.pdf>



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Clarify the link with existing TMDLs: The management strategy adequately addresses current monitoring, research, and programmatic gaps, and proposes approaches to work on closing the gaps. However, it remains unclear how those approaches can be related to existing PCB TMDLs that, as a result of future research and source track down efforts, may be deemed inadequate. In order for the toxics outcome to successfully ‘build on existing programs to reduce the amount and effects of PCBs in the Bay and watershed’, the approaches proposed need to be related to the current regulatory framework for TMDLs. The management strategy proposes tasks such as establishing more frequent monitoring requirements for NPDES permittees, developing a PMP framework and guidance document, supporting research on cost-effective tools for source track-down studies, and investigating atmospheric sources of PCBs. The ways in which the results of these management approaches will be integrated into the existing TMDLs needs to be articulated. While there are some robust PCB TMDLs within the watershed, there are also TMDLs that are inadequate and have resulted no action. For example, the PCB TMDL for the Susquehanna River from Pennsylvania Route 92 to the confluence with the Western Branch, as it currently stands, will not result in reductions in PCB loads. As a result of minimal source assessment efforts, the entirety of the PCB load was attributed to load allocation, specifically instream sediment. Because the PCBs present in the main stem are attributed to only historical use of the chemical, the PCB level is simply “expected to decline over time due to the ban on use through natural attenuation”.⁴ However, the number of fish advisories due to PCB contamination in the Susquehanna River continues to increase. The gaps addressed in the management strategy, the lessons learned in the Delaware Estuary, as well as evolving knowledge about on-going sources of PCBs, indicate that TMDLs exhibiting this lack of detailed, thorough source investigation are not appropriate and result in ineffective, “do-nothing” TMDLs that will not result in a successful toxics outcome. The results anticipated to be achieved by the approaches suggested in the management strategy will have significant influences on the assumptions and assessments made in existing TMDLs. It is therefore vital to include within the management strategy the ways in which the existing PCB TMDLs will be updated and enhanced. CBF calls for including an evaluation of existing TMDLs and reissuance of TMDLs that are affected by the results of actions proposed by this management strategy.

Provide more details on solutions for identified obstacles to success: Further, in section III of the management strategy, the factors influencing the success of the toxics outcome are identified as: a lack of political will to modify regulatory

⁴ http://www.epa.gov/waters/tmdl/docs/29485_SusqReport.pdf



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programs and create voluntary programs, different state water quality standards, the high costs of remedies and wastewater track-down studies, forcing a paradigm shift to acknowledge the existence of ongoing sources of PCBs, and knowledge gaps on the relative sizes of PCB sources. The bulk of the strategy approaches seem to relate to the last factor as well as some discussion of addressing the potentially high-costs of source track-down studies. The strategy would benefit from discussion of approaches that could be effective to address the remaining factors that will absolutely influence the success of the outcome. Lack of political will to modify existing programs and bringing about the necessary paradigm shift towards acknowledging that PCBs are not just a legacy contaminant are substantial obstacles that the management strategy does not explicitly address.

Federal government should lead by example. Increasing baseline public awareness of the presence and extent of PCB contamination in the watershed, through the approaches described in the local participation section, indirectly address these issues because raising public awareness of the extent of contamination, as well as of the known potential human health impacts has the potential to help shift political will. However, providing more explanation of efforts to gain political support for implementing PCB reduction activities and addressing regulatory inadequacies is critical. In terms of overcoming a lack of interest and will to create voluntary programs, CBF believes that the federal government could lead by example and commit to eliminating PCB transformers and other PCB sources on their properties including hazardous waste sites. It will also be vital for the work group to monitor progress on the EPA's Reassessment of PCB Use Authorization Rule associated with the Toxic Substance Control Act. The rule will be addressing PCB transformers to which the PCB ban did not apply because they were "grandfathered in". These PCB transformers have not been phased out at the rate that was originally anticipated. EPA is conducting an economic analysis to determine the feasibility of replacing these transformers before issuing the new rule. Input from this work group indicating that the major obstacle for addressing PCB contamination in the watershed is the extremely high cost of remediation efforts will be crucial. The work group should advocate for taking every opportunity to practice pollution prevention (phasing out all PCB transformers as quickly as possible) because pollution prevention is more fiscally responsible than having to deal with the effects of PCB contamination for decades to come.

Address issue of jurisdictional differences in water quality standards. We also suggest further acknowledgement and discussion of the challenge presented by the different state water quality standards and the different goals/ endpoints across regulatory controls (jurisdictions as well as federal agencies). Early in the management strategy development, the work group heard from a representative of



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the DRBC who explained the consistent water quality standard was fundamental in the Delaware estuary PCB TMDL. While the unique regulatory capabilities of the River Basin Commission allowed them to set the water quality standards for the whole estuary, and a common standard may not be a reasonable expectation for the Chesapeake Bay watershed, it is still important to provide information on how this issue will be dealt with to ensure a successful outcome to the toxics contaminant goal.

Toxic Contaminants Research

Add neonicotinoids and glyphosate to the list of chemicals of emerging concern:

CBF supports the inclusion of neonicotinoids and glyphosates in the discussion of contaminants of emerging concern in this management strategy. The baseline knowledge of the extent, and severity of the impacts of these contaminants in the watershed is indeed very limited. Even though not yet conclusively proven, pesticides, especially those containing neonicotinoid compounds, are suspected to pose a chronic toxicity threat to honey bees and other pollinators. As the management strategy states, colony collapse disorder is not yet a substantial issue in the watershed, but we support taking proactive measures now, rather than being forced to act reactively when the potential impacts are realized. In addition to the suspected harmful impacts to pollinators, emphasis should be placed on understanding the risks posed by these contaminants to aquatic ecosystems. A review published this year reports recent research has demonstrated that toxic residues of neonicotinoid compounds have been detected in the majority of waterbodies sampled. Correlative links have been made to those waterbodies in which neonicotinoid compounds were detected and reduced aquatic insect populations.⁵ While the use of neonicotinoid products has been propagated because their acute toxicity to mammals, fish, and birds is generally reported as being lower than that of other insecticides, studies have shown that extremely low concentrations appear to present a measurable toxicity threat to a wide variety of aquatic invertebrates⁵. The review concludes that in order to protect aquatic ecosystems, and the broader range of biodiversity they support, additional safety factors, and stricter rules could be applied to the use of these pesticides. Due to the potential of very high non-target species toxicity, we support further investigation into not only the impacts of these chemicals on pollinators, but also on aquatic ecosystems. CBF also encourages editing the language used in proposing monitoring for the presence and adverse effects of these emerging pesticide/herbicides to include not only compounds such as neonicotinoids and glyphosate, but also the degradation products of these chemicals; as even less is known and understood about the compounds and mixtures of compounds that are the result of these substances degrading in the environment.

⁵ www.researchgate.net/.../546917600cf2f5eb1804eb65.pdf



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Support research on multiple benefits of BMPs. We encourage research efforts to identify which best management practices might provide multiple benefits of reducing nutrient and sediment pollution as well as toxic contaminants in waterways. Research is emerging that indicates these emerging contaminants of concern are being detected in stormwater runoff in urban areas across the country. Therefore, emphasizing practices that simultaneously reduce toxic contaminants as well as nutrients and sediment can be critical to mitigating the currently undetermined, but likely substantial, impacts of these chemicals.

Citizen Stewardship

Overall, the management strategy does an excellent job of comprehensively describing the most pressing challenges and potential opportunities for amplifying, augmenting, and accelerating existing efforts to engage local citizen stewards in conservation and restoration activities.

In particular, we heartily agree with the Strategy's two foundational premises that:

- 1) meeting the goals of the Agreement depends upon engaged citizens supporting and leading stewardship at the community level as well as taking individual action, and
- 2) citizen stewardship activities will need to be more strategically focused, better coordinated, taken to scale, regularly monitored and assessed, and engaging more targeted and diverse audiences in order to effectively achieve these goals.

Below please find comments designed to strengthen the strategy and the subsequent work plans.

Engaging additional partners is critical. The strategy states that in the forthcoming work plan, "it will identify specific partner commitments for implementing the strategy." (p. 2) We believe that identifying and gaining commitment from partners is an essential step both for establishing the baseline for existing citizen stewardship efforts across the watershed, and for implementing the many actions outlined in the Strategy.

One of our principal concerns with implementing the management approaches is that the strategy identifies so many actions necessary to accelerate citizen stewardship. They are absolutely the right actions, and they are comprehensive, providing the Chesapeake Bay watershed community with a complete picture of the current situation and some suggested future directions. These actions, taken together, are also well beyond the scope of the Bay Program itself, or even likely beyond that of a cadre of existing NGOs and other partners working together.



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When a landscape-scale, collaborative effort like this has accurately diagnosed the “problem” and the suite of solutions to address it (the first hurdle), the next potential point of breakdown is in the prioritization phase, leading into implementation—where the degree of buy-in from partners is often tested. We encourage the work planning team to undertake a rigorous process of prioritization, defining needed first phase actions that tackle the initial challenges that the citizen stewardship community must overcome first, and creating a foundation on which subsequent phases can build. We also encourage you to regularly and often engage the partners who will be needed to implement these actions on the ground, to elicit their perspective and expertise, and to gain strong buy-in and support at the early stages of the Agreement’s implementation.

Targeting. The strategy wisely puts the focus squarely on impact, and whether existing and planned activities are really achieving the outcomes necessary for water quality restoration. This is the right approach. It also correctly identifies most of the key capacity barriers, providing a ready map for various issues on which to engage to improve capacity.

We agree that one of the barriers to increasing numbers and diversity of stewards is that programs lack the capacity to effectively target the audiences they want to engage (p. 3). Does the Bay Program anticipate helping to identify target audiences—working with and with the input of partner organizations—for stewardship programs in its work plans? Alternatively, have you considered the possibility of “targeting” to include not just diversity or interest groups, but targeting stewardship efforts to areas where significant (or even the greatest) sources of pollution are located? Given all the data the Bay Program has regarding pollution sources, this may be an interesting approach to help maximize the pollution-reduction potential of stewardship activities.

The Management Strategy also notes that many programs do not have a leadership development pipeline that links public outreach activities with volunteer opportunities in order to cultivate community leaders (p. 4). We agree that the links between outreach and action should be strengthened to facilitate the development of aware citizens into neighborhood and community leaders.

Linking policy and action. We also see a gap in some programs in effectively linking individual actions to both impact and to policy, such that the full context of stewardship activities is understood and appreciated. The strategy addresses a missing link between regulatory and policy efforts and outreach in the context of consumer choice and behavior (p. 5). We would contend that this missing link frequently exists—much more broadly than in just the question of consumer choice—between stewardship actions on the ground and an understanding of the regulatory and policy context that either enables or undermines these actions. Just



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as policy can help drive action, we hope that citizen stewardship can be recognized as a key driver of informed, practical, and workable policy and regulation that is needed to facilitate on-the-ground action.

Develop a clearinghouse of stewardship programs. The “Individual Actions and Behaviors” section of the Strategy provides a helpful sampling of some of the existing citizen stewardship programs in the region. We recognize that it is not comprehensive, but wonder whether the Bay Program might consider augmenting the list (or find a willing partner to do so) to provide a broader “clearinghouse” of information about existing programs. Such resources can be very useful for newer stewardship programs seeking expertise and advice on particular approaches (e.g., tech transfer), as well as helping to either reduce duplication of effort or increase economies of scale—both implicit goals of the strategy.

Tracking progress is do-able, but challenging. Establishing mechanisms to measure impact and track progress of citizen stewardship programs (p. 13) is a worthy goal, and probably a goal only an entity like the Bay Program has the suitable role and mandate to help achieve. This will also pose a significant challenge, as stewardship programs often struggle to monitor and track their own progress, much less contribute that data outside their programs. As the Bay Program well knows, mechanisms for measuring impact are only as good as the quality and quantity of the data going into them, as well as the awareness that potential data contributors have of them. While we think this is an important element of tracking progress towards Bay and local water quality restoration, any mechanism will require strong outreach, marketing, incentive, and follow-up components in order to ensure that the necessary data is contributed to make future analyses robust and as comprehensive as possible.

Overall, we agree with the approaches outlined in the Management Strategy; they all have merit and are responding appropriately to the challenges and potential opportunities inherent in citizen stewardship work. We would like to offer some observations on or reinforcements of a few of them, including:

Increase program effectiveness to achieve results from citizen stewardship programs targeting individual behaviors → Prioritize the individual citizen or community behaviors that have the greatest potential to positively impact water quality: This kind of prioritization (a variation on which we mention in the context of “targeting,” above) is critical in order for citizen stewardship to realize its full potential in water quality restoration efforts. Given the magnitude of the challenges and the timeline on which we must address them effectively, this prioritization is essential to ensure that our stewardship resources are achieving the greatest impact possible.



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Increase direct engagement of diverse organizations and communities → Engage in a process of community-based listening with trusted local leaders to understand the connection of local issues and environmental goals: We believe this kind of listening is extremely important for understanding local contexts and the changes we need to make in existing stewardship programs to engage and mobilize key communities and constituencies. Many effective community organizing efforts start from the principle of “meeting people where they are,” and a listening process is usually an essential first step.

Expand citizen participation in science and monitoring → Create a framework for the integration and effective use of citizen collected monitoring data in the Chesapeake Bay Program/Pilot and expand support for citizen-led inspection and verification efforts for selected BMPs and BMP systems: Citizen science efforts are an effective way to build a stewardship ethic around particular areas and/or practices, as well as a good way to collect useful data that might not be feasible to collect otherwise. The Bay Program is particularly well poised to help the stewardship community expand such efforts. It would also be helpful to have the Bay Program catalyze a discussion (whether at the work plan stage or shortly thereafter) that identifies a water quality data “wish list” that be systematically collected by citizen stewards. One citizen-led inspection and verification effort we hope the Bay Program is already aware of is Community Environmental Defense Services’ Greater Baltimore Survey construction site erosion and sediment control compliance monitoring program, as well as its new stormwater BMP assessment process. These projects directly engage citizen scientists in assessing on-the-ground practices that have enormous pollution impacts, both positive and negative. They provide almost immediately actionable data on which citizens can base their outreach and education efforts with local officials, contractors, and other members of their communities.

Increase organizational capacity and effectiveness to build citizen leaders → Share information and data that will help citizen leaders prioritize actions that will best benefit local communities and that have the greatest probability for success/Help organizations prioritize volunteer actions that will have the greatest probability of success and yield the greatest environmental benefits: Even on its own, without the context of the rest of the Management Strategy, this kind of data sharing and prioritization support would be of huge benefit to the citizen stewardship community, to inform how we set goals, develop programs, and deploy stewardship resources.

We look forward to more details in the work plans on how these approaches and actions can be implemented in the future. We also encourage the Bay Program to continue to seek out and tap expertise and perspective on these approaches and actions within the Bay-wide NGO community, as well as other entities.



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Submerged Aquatic Vegetation

Submerged aquatic vegetation (SAV) represents one of the most biologically diverse and productive habitats in the Chesapeake Bay region. Unfortunately, restoration success has been elusive due to a combination of water quality impairments, climate change, and lack of a focused management and restoration strategy.

Developing a strong outcome based management strategy could help to refocus SAV restoration efforts and lay the groundwork for more positive outcomes in the future. Due to the different stressors and expertise in SAV on a regional level we believe research and restoration efforts focused at this level could help assure better outcomes in the future.

SAV coverage, as currently mentioned in the management strategy, is influenced by many different factors from year to year (i.e. storms, climate) and therefore it is especially important to research factors which we have control over (i.e. restoration efforts) to ensure progress. Furthermore, other restored systems have often exhibited lag-times and non-linear responses emphasizing the need to track reductions.

Prioritize Research Needs. As written the management strategy appears heavily focused on research. Although research is extremely important to improving our future success and a number of different research topics are listed, there is currently no prioritization for those needs. Developing a priority list of research projects could help ensure that limited research dollars are spent in a way that ensures more restoration success in the future. The management approach could also be improved by research efforts that determine specific instances of local water quality issues (e.g. dredging, propeller scarring pg. 4) which are the most problematic for SAV so that education, outreach and regulation can occur for these facilities and operations.

Target Restoration Opportunities. The management strategy could be improved by better recognizing and discussing the opportunities and challenges for SAV based on salinity/geographic region. SAV throughout the Chesapeake Bay and its tributaries are suffering from poor water quality. Lower Bay grasses have also exhibited deleterious effects due to climate change. Although mid-Bay grasses have maintained their approximate acreage from year to year, they are suffering from a lack of historical diversity. Currently upper bay grasses have shown the most promise in term of restoration potential.



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Coordinate efforts with shellfish restoration: The strategy does not currently contemplate coordination with oyster-restoration and/or shellfish aquaculture efforts which are widespread in the lower Chesapeake Bay and currently expanding. Given the local water quality benefits of oyster reefs and the fact that these ecosystems often occur together naturally; partnered efforts could produce synergistic results. In addition, aquaculturists on Virginia's Eastern Shore have reported increases in SAV adjacent to aquaculture leases. Further study of this relationship could provide additional information on which to base restoration activities.

While it is understandable that the workgroup has limited capacity to accomplish all of the management approaches, it is important to have a component of restoring water clarity in Chesapeake Bay (approach 1). As stated in the report, reducing water clarity is the most important factor in improving the success of SAVs and even though there is substantial work focusing on sediment reductions in conjunction with the Chesapeake Bay Total Maximum Daily Load Process, these efforts represents a very broad effort to benefit many types of aquatic life. It would be beneficial if this group could, at the least, identify particular sources/watersheds of concern, and load reduction progress for areas adjacent to important SAV habitats. This effort could be performed using data already available which should reduce the financial burden.

Increase on-the-ground efforts. The management approach should better identify options to increase on-the-ground restoration. As indicated, restoration has been limited to less than 15 acres per year which is inadequate to meet the restoration goals. In addition, as indicated, funding for large scale restoration has become severely limited. With the upper reaches of the Chesapeake Bay showing some signs of recovery, now is the time to supplement this natural recovery.

The management approaches should be expanded so that research, citizen involvement, and education each have their own separate category. Thus far, citizen involvement has been led by non-governmental organizations that have engaged citizens in these efforts. This management approach should indicate if this will be the continued path or new approaches for citizen involvement are being planned.

Simply stating, "education" is too broad to make this a viable management approach. The groups that would benefit from education vary from citizens to decision makers to elected officials at all levels of government. Due to the broad



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nature of these groups the management strategy would be improved if specific education activities were identified that are actionable.

Forested Buffers

As noted in the strategy, Bay states are relying heavily on forested buffers to achieve their water quality goals, but implementation is woefully lacking. The WIPs call for roughly an additional 185,000 acres of forest buffers by 2025. The forest buffer outcome calls for the establishment of 900 miles of stream buffers per year. Average annual mileage for the past 4 years was 220 miles, clearly, off track. In addition, USDA's CEAP report indicated that buffers are in place on less than one third of cropped acres.

For the last 15 years, CBF has been integrally involved in buffer implementation via our field restoration staff in VA, MD, and PA. We have leveraged federal and state dollars with CBF-raised monies to restore almost 20,000 acres of buffers along stream banks, more than 6,000 acres of wetlands and planted more than 2.2 million trees in upland areas. We have also developed innovative programs such as, "buffer bonus" to encourage greater adoption of best management practices including riparian forested buffers among hard to reach groups like plain sect farmers as well as, traditional farmers and have focused recent efforts on re-enrollment of expiring acres. Most recently, we have actively participated on the State Buffer Task Forces.

While we strongly support all the recommendations of the Task Forces and the development of work plans to provide details on their implementation, we do want to highlight the actions that we believe are the most critical. These recommendations are founded in our long history of delivering buffers, primarily through the Conservation Reserve Enhancement Program (CREP).

Buffers need to be prioritized at the local level. We have seen strong support for buffer implementation from both USDA headquarters and state leads, however, in some instances we do not see the same level of support at the local level where implementation is occurring. CREP is one of several programs for which NRCS provides technical assistance, yet, there doesn't appear to be much of an incentive for field staff to "sell" this program. We recommend that NRCS staff performance measures include delivering CREP buffers.

Improve establishment. We have learned a lot since the first CREP buffers were installed and one of the lessons learned is that maintenance in the first few years of planting is critical to success. Current payments for maintenance are insufficient and the time period should be extended to 5 years.



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Increase financial assistance. The cost-share caps for buffers and associated practices should be increased. In some areas, the cost-share is not in line with actual costs and therefore, the amount of out of pocket expenses for farmers is an obstacle to implementation.

Diversity

CBF has signed onto the Choose Clean Water Coalition's comments on the Diversity Management Strategy. In addition, we offer the follow specific comments:

Page 2 – Citizen Stewardship Goal – We suggest adding another reason “why” we should tackle diversity as a goal, which is to build capacity among a broader and deeper stakeholder group in order to advocate for clean water policies effectively at the local, state and federal level.

Page 5 – Add CBF to the list of non-profits that will provide support for the Diversity Management Strategy.

Page 6 -

1. Second sentence should read: Communications materials need to be relevant to the environmental challenges faced in that community and convey how these issues are important to their well-being and the health of their families.

Add “reduced flooding” to list of potential impacts.

2. More specifically, instead of “undertake more aggressive...” – we need to “recruit from historically black colleges and universities, establish paid internships with state agencies and non-profits for college students to create a pipeline of prepared “fresh-outs” who have some experience beyond their degree in environmental sciences.

Also, consider partnering with non-profit social services – Boys Clubs, Community Centers, Foster Age-Up and faith community to reach at-risk kids and provide some technical training for high school kids who are not college bound.

4. Establish numeric goal for funding – i.e., some minimum amount of money that goes to underserved communities based of percentage of Title 1 schools or other demographic data.

Page 7 – We strongly agree with #6 at top of page – much stronger if not considered a standalone strategy



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Page 8 – Metric is needed. For example if x% of the population in a local jurisdiction is Hispanic, materials must be in Spanish. All materials need to be posted to the web in mobile-ready format.

Page 9 – Second paragraph, sentence starting with “Each workgroup will find champions...benefits the Bay Program provides to the community.” This is inconsistent with earlier statements – finding the intersection of the community’s concerns (flooding, safe drinking water, more green/open space, safer travel corridors, fish consumption, swimming advisories, etc.) and water quality restoration goals. i.e, we’re not messaging the benefit the Bay Program offers – we’re messaging the value that clean water goals can benefit the community.

Page 10 – Including a bullet re: faith outreach – establishes a common frame of reference to begin a dialogue

Page 11 – Under “Key Areas...” – first bullet, instead of “focus” change to “provide additional experiential learning opportunities for youth and”

Environmental Literacy

CBF has two suggestions for the student outcome. First, while there is an understandable emphasis on science education, the strategies should also include civics/social studies and alignment with other curricula. Second, the strategies should include an emphasis on providing opportunities for students to engage in meaningful action to solve local environmental problems.

Thank you for the opportunity to comment on the draft Management Strategies. We hope the relevant workgroups find these comments useful in finalizing the strategies and developing the associated work plans.

Sincerely,

Kim Coble

Vice President of Environmental Protection and Restoration

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